

CLAIM AMENDMENTS

Claim 1 (Currently Amended)

A UV ray curable ink comprising

a pigment,

a polymerizable compound,

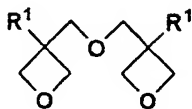
a photopolymerization initiator, and

a polymer dispersant,

wherein the polymerizable compound is a cation polymerizable compound which is comprised of an oxetane compound and at least one of either an epoxy compound or a vinyl ether compound,

wherein the oxetane compound has two oxetane rings and is a compound represented by the following formula 7,

Formula 7



wherein R¹ represents a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a fluoroalkyl group having from 1 to 6 carbon atoms, an allyl group, an aryl group, a furyl group or a thienyl group, and

wherein the UV ray curable ink has an absolute value of a viscosity difference between a viscosity at 25 °C at shear rate 10 (1/s) and a viscosity at 25 °C at shear rate 1000 (1/s) being not more than 5 mPa·s, and has a surface tension at 25 °C of from 26 to 38 mN/m.

Claim 2 (Original)

The UV ray curable ink of claim 1, wherein the absolute value of a viscosity difference in viscosity at 25 °C at shear rate 10 (1/s) between the ink and the polymerizable compound is not more than 10 mPa·s.

Claim 3 (Original)

The UV ray curable ink of claim 1, wherein the absolute value of a viscosity difference between a viscosity at 25 °C at shear rate 10 (1/s) and a viscosity at 25 °C at shear rate 1000 (1/s) is not more than 2 mPa·s.

Claim 4 (Original)

The UV ray curable ink of claim 1, wherein the surface tension at 25 °C is from 28 to 35 mN/m.

Claim 5 (Original)

The UV ray curable ink of claim 2, wherein the absolute value of a viscosity difference in viscosity at 25 °C at shear rate 10 (1/s) between the ink and the polymerizable compound is not more than 5 mPa·s.

Claims 6-13 (Cancelled)

Claim 14 (Currently Amended)

The UV ray curable ink of ~~claim 6~~ claim 1, wherein the cation polymerizable compound content of the ink is from 1 to 97% by weight based on the weight of the ink.

Claim 15 (Original)

The UV ray curable ink of claim 14, wherein the cation polymerizable compound content of the ink is from 30 to 95% by weight based on the weight of the ink.

Claims 16-18 (Cancelled)

Claim 19 (Original)

An image formation method comprising the steps of
ejecting the UV ray curable ink of claim 1 as ink
droplets onto recording material,
employing on-demand type ink jet nozzles; and
irradiating UV rays to the ink ejected on the
recording material to form an image,
wherein the ink droplets comprise two or more separate
droplets with a different volume.

Claim 20 (Original)

The image formation method of claim 19, wherein the
minimum volume of the ink droplets is less than 10 pl.